AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1.   (Currently Amended) A method for identifying contours within pixel-based image data, comprising:

expressing said image data as a grid of columns and rows;

establishing a scan order over said grid to define a parent-child relationship between contiguous pixels in adjacent rows and to define a sibling relationship among non-contiguous pixels in the same row;

establishing a run data structure in computer-readable memory that defines a run member by its row position and by [[is]] its starting and ending column positions;

said run data structure further defining parent, child and sibling structures for storing information about the parent-child relationships and sibling relationships of pixels associated with said run member;

scanning said image data according to said scan order to identify contiguous pixels of a predetermined state as identified run members;

determining the parent-child and sibling relationships of said identified run members;

populating said run data structure with the row position and starting and ending column positions of said identified run member and with the parent-child and sibling relationships of said identified run member;

using said populated run data structure to traverse the parent-child and sibling relationships and thereby identify contours within said pixel-based image data.

2.   (Original) The method Claim 1 further including the steps of generating reconstructed circles based on broken contours, the reconstructed circles uniquely identified and separate from any other circles which overlap the reconstructed circle.

3.   (Original) The method of Claim 1 wherein the predetermined state is a tone, a color and combinations thereof.

4.   (Original) The method of Claim 1 wherein the parent-child and sibling relationships are pointers which establish a linked list of the run member data structures.

5.   (Original) The method of Claim 1 further includes the steps of:

Identifying the first run member occupying a row position and starting and ending column positions;

determining all parent-child and sibling relationships of pixels associated with the first run member;

identifying additional run members based on the parent-child and sibling relationships; and

wherein a connected component is retrieved based on identifying links from the parent-child relationships.